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C07K 16/40 (2006.01)

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(88) Date of publication of the international search report:
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[Continued on next page]

(54) Title: CANINE PANCREATIC LIPASE

Canine Pancreatic Lipase amino acid sequence (SEQ ID NO: 3)

MLLIWTLSLLLGAVVGKEVCFPRLGCFSDSPWAGIVERPLKILPWAPKDVNTRL
YTNENPDNFQELTADPSIITSSSFKTDKTRFI IHGFIDKGEESWLANMCKKMFVVE
SVNCICVDWKGSGSRTGYTQASQNIRIVGAEVAYFVEVLQSAFGYSPSDVHI IGHSLG
AHAAGEAGRRLNGTAGRITGLDPAEPCFEGTPELVRLDPSDAQFVDVIHTDAAPI IP
NMGFGMSQTVGHLDFFPNNGGKEMPGCQKNILSQIVDIDIGIWEGRDFVACNHLSYK
YYSDSILNPDGFAGFPCASYNVFTANKCFPCPSEGCPQMGHYADRFPKTKDKVNQIF
YLDTGDA SNFARWRYKVAVTL SGKKVTGHVLSLFGNKGNSKQYEIFKGTLPPESTH
SNEFSDSVEVGDVQVKVFWYNNVINPTLPRVGASKITVERNDGKIFNFCSKETVRE
DILLTLTPC

(57) Abstract: Isolated nucleic acid molecules having a nucleotide sequence encoding canine pancreatic lipase polypeptides, allelic variants and fragments thereof. Vectors and host cells containing the polynucleotide sequences and methods for expressing the polypeptides. Monoclonal antibodies that specifically binds to the canine pancreatic lipase polypeptides. Cell lines secreting the monoclonal antibodies. Methods for determining the presence or amount of canine pancreatic lipase in a biological sample. The methods include using the monoclonal antibodies to specifically bind to canine pancreatic lipase polypeptides. The method includes using standards of recombinant canine pancreatic lipase. Devices and kits for performing methods for detecting canine pancreatic lipase in biological samples.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2005/012645

A. CLASSIFICATION OF SUBJECT MATTER				
INV. C12N9/20	C12N15/55	C07K16/40	G01N33/573	G01N33/577
According to International Patent Classification (IPC) or to both national classification and IPC				

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols) C12N C07K G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, BIOSIS, Sequence Search, EMBASE, WPI Data, PAJ
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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>STEINER JORG M ET AL: "Purification of classical pancreatic lipase from dog pancreas." BIOCHIMIE (PARIS), vol. 84, no. 12, December 2002 (2002-12), pages 1243-1251, XP007900681 ISSN: 0300-9084 cited in the application abstract; figure 6 page 1244, column 1, line 11 - line 16 ----- -/--</p>	1-5

<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.	<input checked="" type="checkbox"/> See patent family annex.
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* Special categories of cited documents :

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"&" document member of the same patent family</p>
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Date of the actual completion of the international search 8 June 2006	Date of mailing of the international search report 27/06/2006
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Wiame, I
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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2005/012645

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DE CARO J ET AL: "Pancreatic lipase-related protein 1 (PLRP1) is present in the pancreatic juice of several species"</p> <p>BIOCHIMICA ET BIOPHYSICA ACTA. PROTEIN STRUCTURE AND MOLECULAR ENZYMOLOGY, ELSEVIER, AMSTERDAM,, NL, vol. 1387, no. 1-2, 8 September 1998 (1998-09-08), pages 331-341, XP004278488 ISSN: 0167-4838 figures 5,6; table 1</p>	1-5
X	<p>STEINER JORG M ET AL: "Development and analytic validation of an enzyme-linked immunosorbent assay for the measurement of canine pancreatic lipase immunoreactivity in serum."</p> <p>CANADIAN JOURNAL OF VETERINARY RESEARCH, vol. 67, no. 3, July 2003 (2003-07), pages 175-182, XP007900682 ISSN: 0830-9000 cited in the application the whole document</p>	6-35
X	<p>STEINER JORG M ET AL: "Development and validation of a radioimmunoassay for the measurement of canine pancreatic lipase immunoreactivity in serum of dogs."</p> <p>AMERICAN JOURNAL OF VETERINARY RESEARCH, vol. 64, no. 10, October 2003 (2003-10), pages 1237-1241, XP008064998 ISSN: 0002-9645 the whole document</p>	6-35
X	<p>QUIGLEY KELLEY A ET AL: "Hyperlipasemia in 6 dogs with pancreatic or hepatic neoplasia: Evidence for tumor lipase production"</p> <p>VETERINARY CLINICAL PATHOLOGY, vol. 30, no. 3, 2001, pages 114-120, XP007900687 ISSN: 0275-6382 the whole document</p>	11,13
X	<p>DATABASE EMBL [Online] 24 April 1990 (1990-04-24), "Human triglyceride lipase mRNA, complete cds." XP002384143 retrieved from EBI accession no. EM_PRO:J05125 Database accession no. J05125 the whole document</p> <p style="text-align: center;">-/--</p>	1-5

INTERNATIONAL SEARCH REPORT

 International application No
 PCT/US2005/012645

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	& LOWE M E ET AL: "CLONING AND CHARACTERIZATION OF HUMAN PANCREATIC LIPASE CDNA" JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN SOCIETY OF BIOCHEMICAL BIOLOGISTS, BIRMINGHAM,, US, vol. 264, no. 33, 25 November 1989 (1989-11-25), pages 20042-20048, XP000081766 ISSN: 0021-9258	
X	----- TAN S W ET AL: "Production and characterization of murine monoclonal antibodies to Blastocystis hominis" INTERNATIONAL JOURNAL FOR PARASITOLOGY, vol. 26, no. 4, 1996, pages 375-381, XP007900688 ISSN: 0020-7519 abstract	8,9
X	----- VISAI LIVIA ET AL: "Identification and characterization of a new ligand-binding site in FnBB, a fibronectin-binding adhesin from Streptococcus dysgalactiae." BIOCHIMICA ET BIOPHYSICA ACTA, vol. 1646, no. 1-2, 21 March 2003 (2003-03-21), pages 173-183, XP004413499 ISSN: 0006-3002 abstract	8,9
A	----- AOUBALA MUSTAPHA ET AL: "Human pancreatic lipase: Importance of the hinge region between the two domains, as revealed by monoclonal antibodies" JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 270, no. 8, 1995, pages 3932-3937, XP007900686 ISSN: 0021-9258 the whole document	6-35
A	----- US 5 750 333 A (CLARK ET AL) 12 May 1998 (1998-05-12) cited in the application abstract	28-34

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Certain claims have no number, contrary to Rule 6.1(b) PCT. Claims have been renumbered and are being referred to in this search report as follows:

the numbering of claims 1-7 remains unchanged;
8 refers to the unnumbered claim following claim 7;
9 refers to claim 8;
10 refers to claim 9;
11 refers to claim 10;
12 refers to claim 11;
13 refers to claim 12;
14 refers to claim 13;
15 refers to claim 14;
16 refers to the unnumbered claim following claim 14;
17 refers to claim 15;
18 refers to claim 16;
19 refers to claim 17;
20 refers to claim 18;
21 refers to claim 19;
22 refers to claim 20;
23 refers to claim 21;
24 refers to claim 22;
25 refers to claim 23;
26 refers to claim 24;
27 refers to the unnumbered claim following claim 24;
28 refers to claim 25;
29 refers to claim 26;
30 refers to claim 27;
31 refers to claim 28;
32 refers to claim 29;
33 refers to claim 30;
34 refers to claim 31;
35 refers to claim 32.

INTERNATIONAL SEARCH REPORT

International application No.
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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No
PCT/US2005/012645

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5750333	A	12-05-1998	CA 2113351 A1 18-02-1993
			DE 69230884 D1 11-05-2000
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			EP 0600929 A1 15-06-1994
			ES 2145745 T3 16-07-2000
			JP 3309977 B2 29-07-2002
			JP 6510602 T 24-11-1994
			WO 9303176 A1 18-02-1993
			US 5726013 A 10-03-1998
			US 5726010 A 10-03-1998
